

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/SE 2003/001957

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: C07D 403/12, C07D 403/14, C07D 401/12, C07D 401/14, C07D 413/14,  
A61K 31/497, A61K 31/496, A61K 31/537, A61P 25/00, 5/10, 5/48, 5/18, 17/14  
According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C07D, A61K, A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
SE, DK, FI, NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**CHEM.ABS.DATA, WPI DATA, EPO-INTERNAL**

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 03093297 A2 (EXELIXIS, INC.), 13 November 2003 (13.11.2003) --	1,8-10
X	WO 0168612 A2 (COGENSYS, INC.), 20 Sept 2001 (20.09.2001) --	1-24
X	US 2001031772 A1 (KARL SCHOENAFINGER ET AL), 18 October 2001 (18.10.2001) --	1-24
A	WO 02092585 A1 (BIOVITRUM AB), 21 November 2002 (21.11.2002) --	1-24

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	
"A"	document defining the general state of the art which is not considered to be of particular relevance
"E"	earlier application or patent but published on or after the international filing date
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O"	document referring to an oral disclosure, use, exhibition or other means
"P"	document published prior to the international filing date but later than the priority date claimed
"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X"	document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y"	document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
19 April 2004	20-04-2004
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. + 46 8 666 02 86	Authorized officer  EVA JOHANSSON/BS Telephone No. + 46 8 782 25 00

**INTERNATIONAL SEARCH REPORT**International application No.  
PCT/SE 2003/001957**C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 0160806 A2 (NEUROGEN CORPORATION), 23 August 2001 (23.08.2001) --	1-24
A	US 6255307 B1 (BRIAN COX ET AL), 3 July 2001 (03.07.2001) -- -----	1-24

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

31/03/2004

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WO	03093297	A2	13/11/2003	NONE		
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				CA	2400945 A	20/09/2001
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				NO	20024308 A	08/11/2002
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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

31/03/2004

International application No.
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				CA	2398937 A	23/08/2001
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				HU	0301573 A	29/12/2003
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				NO	20023869 A	11/09/2002
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				AU	732915 B	03/05/2001
				AU	6823798 A	18/09/1998
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				BR	9807814 A	22/02/2000
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				DE	69818643 D	00/00/0000
				DK	966448 T	02/02/2004
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				NO	313383 B	23/09/2002
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				NZ	337121 A	30/03/2001
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### Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: **17-22**  
because they relate to subject matter not required to be searched by this Authority, namely:  
**see extra sheet**
2.  Claims Nos.: **9, 11, 17**  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
**see extra sheet**
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

**see extra sheet**

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**1-24**

#### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

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### Box II.1

Claims 17-22 relate to methods of treatment of the human or animal body by surgery or by therapy or diagnostic methods practiced on the human or animal body (Rule 39.1(iv)). Nevertheless, a search has been executed for these claims. The search has been based on the alleged effects of the compounds or compositions.

### Box II.2

The expression "conditions associated with glycogen synthase kinase-3" in claims 9, 11 and 17 is not clear and concise and does not comply with PCT Articles 5 and 6 as it defines the conditions by the mechanism behind the conditions and does not mention the specific conditions. It is therefore not clear which conditions are comprised by these claims. The search has been performed on the general expression in some parts but has mainly been focused on the conditions named in claims 12, 14 and 16.

### Box III

According to PCT Article 34 (3) (a-c) and Rule 13.2, an application shall relate to one invention only or to a group of inventions linked by one or more of the same or corresponding "special technical features", i.e. features that define a contribution which each of the inventions makes over the prior art. In order to consider that end products and intermediates represents one invention it is necessary that the essential structural elements of the end product also can be found in the intermediate. Claims 25-34 of the present application relate to a number of intermediates and their use. These compounds are not considered to have enough structural similarity with the end products to fulfil the demands of unity. The compounds defined of the application have been divided into four inventions according to the following:

- 1) Compounds according to formula I. Pharmaceutical formulations, use and methods involving these compounds and processes for the preparation of the compounds. Claims 1-24.
- 2) Compounds according to formula XIXa and their use. Claims 25-27 and 34 partially.

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3) Compounds according to formula IV and their use. Claims 28-30 and 34 partially.

4) Compounds according to formula XXII and their use. Claims 31-33 and 34 partially.

Only invention I (claims 1-24) has been searched.